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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/092,665

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Tamihei Hiramatsu

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EXAMINER

WONG, WARNER

ART UNIT

PAPER NUMBER

2668

DATE MAILED: 01/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/092,665	<b>Applicant(s)</b> HIRAMATSU ET AL.	
	<b>Examiner</b> Warner Wong	<b>Art Unit</b> 2668	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,5-10,13-18,20,21,23,24 and 27-31 is/are rejected.
- 7) ☒ Claim(s) 3,4,11,12,19,22,25,26 and 32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because figures 1 and 2 should indicate "Prior Arts" as the drawings are referenced only in the "Related Art" section of the specification.

### ***Specification***

2. The disclosure is objected to because of the following informalities: On page 31, line 23, the word "flame" should be grammatically corrected as "frame".

Appropriate correction is required.

### ***Claim Objections***

3. Claim 17 is objected to because of the following informalities: On lines 33-34, the phrase "and the data of the section 1. is read from said second record medium" is redundant/identical to the immediate phrase describing the same details.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 5-10, 13-18, 20-21, 23-24 and 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeBey (5,701,582) in view of Genter (4,301,534).

**Regarding claim 1**, DeBey describes a transmitting apparatus for transmitting a content (fig. 7a, #60), comprising:

a record medium on which at least one content has been written (fig. 7A, #76 and col. 14, lines 11-14).

section generating means (process) for generating section 1 to section n (where n is an integer) such manner that when the content is divided into the section 1 to the section n in a predetermined ratio, the length of a section on the beginning side is smaller than the length of a section on the end side (fig. 8 and col. 15, lines 56-63);

In view of claim 1, DeBey lacks what Genter describes:

signal formatting means (process) for formatting a signal in such a manner that the length of data of each of the section 1 to the section n is the same in each of channel 1 to channel n, multiplexing means for multiplexing the formatted signal, and transmitting means for transmitting the multiplexed signal (fig. 1 & col. 1, lines 51-56, where each section is sampled/formatted to a fixed length of eight bits, time-division multiplexed with the synchronization bit and transmitted out as a T1 frame) for the purpose of providing a higher bandwidth of transmitting many channels over a digital T1 (more accurate) line.

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to incorporate a T1 signal format in transmitting the output

described by DeBey. The motivation is to provide a higher bandwidth of transmitting many channels over a digital T1 (more accurate) line (Genter, col. 1, lines 17-19).

**Regarding claim 9**, DeBey describes transmitting method for transmitting a content, comprising the steps of:

writing at least one content to a record medium (fig. 7A, #76 and col. 14, lines 11-14);

generating section 1 to section n (where n is an integer) in such a manner that when the content is divided into the section 1 to the section n in a predetermined ratio, the length of a section on the beginning side is smaller than the length of a section on the end side (fig. 8 and col. 15, lines 56-63);

formatting a signal in such a manner that the length of data of each of the section 1 to the section n is the same in each of channel 1 to channel n, multiplexing the formatted signal; and transmitting the multiplexed signal.

In view of claim 1, DeBey lacks what Genter describes:

formatting a signal in such a manner that the length of data of each of the section 1 to the section n is the same in each of channel 1 to channel n, multiplexing the formatted signal; and transmitting the multiplexed signal signal (fig. 1 & col. 1, lines 51-56, where each section is sampled/formatted to a fixed length of eight bits, time-division multiplexed with the synchronization bit and transmitted out as a T1 frame) for the purpose of providing a higher bandwidth of transmitting many channels over a digital T1 (more accurate) line (Genter, col. 1, lines 17-19).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to incorporate a T1 signal format of Genter in transmitting the output described by DeBey. The motivation is to provide a higher bandwidth of transmitting many channels over a digital T1 (more accurate) line (Genter, col. 1, lines 17-19).

**In regards to claim 23**, Debey describes a transmitting and receiving system having a transmitting apparatus for transmitting a content (fig. 7A) and at least one receiving apparatus for receiving the transmitted content and reproducing the received content (fig. 7B), wherein

the transmitting apparatus comprises:

a first record medium on which at least one content has been written (fig. 7A, #76 and col. 14, lines 11-14);

section generating means (process) for generating section 1 to section n (where n is an integer) in such a manner that when the content is divided into the section 1 to the section n in a predetermined ratio, the length of a section on the beginning side is smaller than the length of a section on the end side (fig. 8 and col. 15, lines 56-63);

wherein the transmitting apparatus transmits the content that has been divided by n to the receiving apparatus (fig. 8 and col. 15, lines 56-63) through a transmission line (fig. 2, Network #36).

the receiving apparatus comprising:

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detecting means for detecting beginning data of each of the section 1 to the section n from the separated signals (col. 11, lines 24-28, where the receiver differentiates the section-based packets by packet ID);

a second record medium on which the beginning data of each of the section 1 to the section n is written to channel 1 to channel n, respectively (fig. 7B, #90 and col. 14, lines 58-61);

reading (playback) means for successively reading data of the section 2 to the section n from said second record medium after the beginning data of the section 1 is detected (col. 16, line 67 & col. 17, lines 1-2, where playback in order requires section 1 is detected), the data of the section 1 is written to said second record medium starting from the beginning data of the section 1 (col. 17, lines 3-5, where fragments of section 1 (thru 8) are stored in buffer in order as depicted in fig. 10, incoming fragments), the data of the section 1 is read from said second record medium (col. 17, lines 23-24, where "playback" equates to "read");

reproducing means for reproducing the data of the section to the section n that has been read from said second record medium (col. 16, line 67 & col. 17, lines 1-2);

wherein when the receiving apparatus detects beginning data of the received content, the receiving apparatus reproduces the content (col. 17, lines 20-24, where beginning data comprises every one of the fragments).

In view of claim 23, DeBey lacks what Genter describes:

the transmitting apparatus comprising:

signal formatting means (process) for formatting a signal in such a manner that the length of data of each of the section 1 to the section n is the same in each of channel 1 to channel multiplexing means for multiplexing the formatted signal, and transmitting means for transmitting the multiplexed signal (fig. 1 & col. 1, lines 51-56, where each section is sampled/formatted to a fixed length of eight bits, time-division multiplexed with the synchronization bit and transmitted out as a T1 frame); and

the receiver apparatus comprising:

separating means for separating the received signal (col. 1, lines 39-40, where demultiplexing equates to separating the T1 frame contents back into individual sections). The above transmitting and receiving means are used for the purpose of providing a higher bandwidth of transmitting many channels over a digital T1 (more accurate) line (Genter, col. 1, lines 17-19).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to incorporate a T1 signal format in transmitting the output described by DeBey. The motivation is to provide a higher bandwidth of transmitting many channels over a digital T1 (more accurate) line (Genter, col. 1, lines 17-19).

**Regarding claims 2, 10 and 24**, DeBey and Genter combined described all limitations set forth in claims 1, 9 and 23 above respectively. DeBey further describes:

the data of each of the section 1 to the section n has been written to said record medium corresponding to pre-designated addresses (col. 6, lines 6-10 & lines 16-19, where the contents stored in storage media which is segmented [pre-designated addresses]):



**Regarding claims 5, 13 and 27**, DeBey and Genter combined described all limitations set forth in claims 1, 9 and 23 above respectively. DeBey further describes:

said signal formatting means repeats data of the section 1 to the section n-1 (DeBey, fig. 5 & col. 33-46, where data of each of the sections 1 to n-1 is repeated throughout the transmission according to the scheduling algorithm)

Genter further describes:

that the length of each of signals of the channel 1 to the channel n-1 is the same as the length of a signal of the channel n (fig. 1 & col. 1, lines 51-56, where each section is sampled/formatted to a fixed length of eight bits, time-division multiplexed with the synchronization bit and transmitted out as a T1 frame) for the purpose of providing a higher bandwidth of transmitting many channels over a digital T1 (more accurate) line (Genter, col. 1, lines 17-19).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to incorporate a T1 signal format of Genter in transmitting the output described by DeBey. The motivation is to provide a higher bandwidth of transmitting many channels over a digital T1 (more accurate) line (Genter, col. 1, lines 17-19).

**Regarding claims 6, 14 and 28**, DeBey and Halsall combined described all limitations set forth in claims 1, 9 and 23 above respectively. DeBey and Genter combined further describes:

said signal formatting means repeats data of each of the section 1 to the section m-1 (DeBey, fig. 5 & col. 33-46, where data of each of the sections 1 to n-1, including m-1, is repeated throughout the transmission according to the scheduling algorithm).

Genter further describes:

that the length of each of signals of the channel the channel m-1 (where  $1 < m < n$ ; m is an integer) is the same as the length of a signal of the channel m and that the length of each of the signals of the channel m to the channel n is the same as the length of the signal of the channel m (fig. 1 & col. 1, lines 51-56, where each section is sampled/formatted to a fixed length of eight bits, time-division multiplexed with the synchronization bit and transmitted out as a T1 frame) for the purpose of providing a higher bandwidth of transmitting many channels over a digital T1 (more accurate) line (Genter, col. 1, lines 17-19).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to incorporate a T1 signal format of Genter in transmitting the output described by DeBey. The motivation is to provide a higher bandwidth of transmitting many channels over a digital T1 (more accurate) line (Genter, col. 1, lines 17-19).

**Regarding claims 7, 15 and 29**, DeBey and Genter combined described all limitations set forth in claims 1, 9 and 23 above respectively.

DeBey further describes that each section is sent as a packet with title ID and packet ID (flag data) appended (as header) which represents that beginning data is

contained in each of the section/packet (for all section/packet #1 to n) (col. 11, lines 14-15).

Genter further describes the multiplexing means multiplexes synchronous bit (data) and the data (packet) of section 1 to the section n (fig. 1 & col. 1, lines 51-56, where each section is sampled/formatted to a fixed length of eight bits, time-division multiplexed with the synchronization bit and transmitted out as a T1 frame) for the purpose of providing a higher bandwidth of transmitting many channels over a digital T1 (more accurate) line (Genter, col. 1, lines 17-19).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to incorporate a T1 signal format of Genter in transmitting the output described by DeBey. The motivation is to provide a higher bandwidth of transmitting many channels over a digital T1 (more accurate) line (Genter, col. 1, lines 17-19).

**Regarding claims 8, 16 and 30**, DeBey and Genter described all limitations set forth in claims 1, 9 and 23 above respectively. Genter further describes that the multiplexed signal is modulated (col. 1, lines 6-10 & 21-23, PCM-modulated) for the purpose of abiding to the standard T1 signal format which then may communicate with other T1 devices.

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to incorporate a T1 signal format of Genter in transmitting the output described by DeBey. The motivation is to provide a higher bandwidth of

transmitting many channels over a digital T1 (more accurate) line (Genter, col. 1, lines 17-19).

**Regarding claims 17 and 20**, DeBey describes a receiving apparatus for receiving a signal from a transmitting apparatus and reproducing the received signal (fig. 7B),

The transmitting apparatus comprising:

a first record medium on which at least one content has been written (fig. 7A, #76 and col. 14, lines 11-14), section generating means for generating section 1 to section n (where n is an integer) in such a manner that when the content is divided into the section to the section n in a predetermined ratio, the length of a section on the beginning side is smaller than the length of a section on the end side (fig. 8 and col. 15, lines 56-63).

The receiving apparatus comprising:

detecting means for detecting beginning data of each of the section 1 to the section n from the separated signals (col. 11, lines 24-28, where the receiver differentiates the section-based packets by packet ID);

a second record medium on which the beginning data of each of the section 1 to the section n is written to channel 1 to channel n, respectively (fig. 7B, #90 and col. 14, lines 58-61).

reading (playback) means for successively reading data of the section 2 to the section n from said second record medium after the beginning data of the section 1 is detected (col. 16, line 67 & col. 17, lines 1-2, where playback in order requires section 1

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is detected), the data of the section 1 is written to said second record medium starting from the beginning data of the section 1 (col. 17, lines 3-5, where fragments of section 1 (thru 8) are stored in buffer in order as depicted in fig. 10, incoming fragments), the data of the section 1 is read from said second record medium (col. 17, lines 23-24, where "playback" equates to "read"),

reproducing means for reproducing the data of the section to the section n that has been read from said second record medium (col. 16, line 67 & col. 17, lines 1-2).

In view of claim 17, DeBey lacks what Genter describes:

The transmitting apparatus comprising:

signal formatting means for formatting a signal in such a manner that the length of data of each of the section to the section n is the same in each of channel 1 to channel n, multiplexing means for multiplexing the formatted signal, and transmitting means for transmitting the multiplexed signal (fig. 1 & col. 1, lines 51-56, where each section is sampled/formatted to a fixed length of eight bits, time-division multiplexed with the synchronization bit and transmitted out as a T1 frame); and

the receiver apparatus comprising:

separating means for separating the received signal (col. 1, lines 39-40, where demultiplexing equates to separating the T1 frame contents back into individual sections). The above transmitting and receiving means are used for the purpose of providing a higher bandwidth of transmitting many channels over a digital T1 (more accurate) line (Genter, col. 1, lines 17-19).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to incorporate a T1 signal format in transmitting the output described by DeBey. The motivation is to provide a higher bandwidth of transmitting many channels over a digital T1 (more accurate) line (Genter, col. 1, lines 17-19).

**Regarding claims 18, 21 and 31**, DeBey and Genter combined describe all limitations set forth in above claims 17, 20 and 23 respectively. DeBey further describes:

said detecting means detects bit 1 to bit n corresponding to the section 1 to the section n of flag data contained in the signal so as to detect whether or not beginning data of the section 1 to the section n are present (fig. 4, "looks for title ID" and "looks for packet ID", & col. 11, lines 14-15, where the title ID and packet ID are appended as headers to each packet/section sent).

### ***Allowable Subject Matter***

6. Claims 3, 4, 11-12, 19, 22, 25-26 and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Hiramatsu (6,594,052), Kermode (6,018,359), Hoang (6,725,267), Makam (5,699,362), Emura (5,922,048) and Kim (2005/0163148).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Warner Wong whose telephone number is 571-272-8197. The examiner can normally be reached on 5:30AM - 2:00PM, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Warner Wong  
Examiner  
Art Unit 2668

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